

Quick Look at Live Attenuated Influenza Vaccine (Quadrivalent): LAIV4, 2021-22

Annual influenza vaccination is recommended for all persons aged 6 months and older, including all healthy persons!

Indications for Use and Schedule

- LAIV4 (intranasal) is for persons aged **2 through 49 years** who:
 - Are healthy
 - Are **not** pregnant
- Vaccination is recommended to be offered by the end of October and **continued throughout the flu season** until vaccine expires

Key Points

- **No** preference for any flu vaccine product for any age group
 - Ensure vaccination occurs with an **age-appropriate product and dose volume**
- Some children aged 6 months through 8 years may need 2 doses of 2021-22 seasonal flu vaccine to best protect them (see below)
- Persons aged 9 years and older only need 1 dose of flu vaccine, regardless of previous flu vaccination history

Vaccine Administration¹

- Administer **intranasal** 0.2 mL
 - Spray 0.1 mL into **each nostril** as indicated by dose-divider clip on sprayer
 - Use 0.2 mL dose for all ages 2 through 49 years
- LAIV4 can be given with other vaccines at the same visit – do not miss an opportunity
- If LAIV4 is not given on the same day as other live vaccines (MMR, Var, MMRV), separate by 28 days
- For more on LAIV4 administration, refer to “Administering Influenza Vaccines” at www.michigan.gov/flu

Storage and Handling

- Store in the refrigerator at **36°F to 46°F (2°C to 8°C)**
- Pharmaceutical-grade (purpose-built) units are preferred for vaccine storage
- Do **not** freeze; keep in original box with lid on/protect from light
- Do **not** use expired vaccine
- LAIV4 expiration dates differ from other flu vaccine expiration dates

INFORMATION ON WHICH CHILDREN AGED 6 MONTHS THROUGH 8 YEARS NEED 2 DOSES OF FLU VACCINE:

- Determination of the number of doses needed is based on the number of doses of flu vaccine received in previous seasons and the age at the time of the first dose of 2021-22 flu vaccine
- Children aged 6 months through 8 years who received 2 or more total doses of any trivalent or quadrivalent flu vaccine (i.e., IIV3, IIV4, LAIV3, LAIV4, cclIV3, cclIV4) at least 4 weeks apart before July 1, 2021, only need 1 dose of 2021-22 flu vaccine
- If a child has not received at least 2 trivalent or quadrivalent flu vaccines at least 4 weeks apart before July 1, 2021, give 2 doses of 2021-22 flu vaccine separated by 4 weeks
 - Give the 1st dose as soon as possible after vaccine becomes available to allow the 2nd dose to be received by the end of October
 - Both doses should be administered even if the child turns 9 years old between dose 1 and dose 2
- Refer to “Who Needs 2 Doses of 2021-22 Seasonal Influenza Vaccine?” at www.michigan.gov/flu

CONTRAINDICATIONS (PERSONS WHO SHOULD NOT RECEIVE LAIV4):

- Severe allergic reaction (e.g., anaphylaxis) after a previous dose of flu vaccine (i.e., any egg-based IIV, cclIV, RIV, or LAIV) or one of its components
- Concomitant aspirin- or salicylate-containing therapy in children and adolescents
- Children aged 2 through 4 years with a history of asthma or documented wheezing episode in past 12 months
- Immunocompromised due to any cause, including but not limited to immunosuppression caused by medications, congenital or acquired immunodeficiency states, HIV infection, anatomic asplenia, or functional asplenia (e.g., sickle cell anemia)
- Close contacts and caregivers of severely immunosuppressed persons who require a protected environment
- Pregnancy

CONTRAINDICATIONS, CONTINUED:

- Persons with active communication between the cerebrospinal fluid (CSF) and oropharynx, nasopharynx, nose, or ear or any other cranial CSF leak
- Persons with cochlear implants
- Receipt of influenza antiviral medication within the previous 48 hours for oseltamivir and zanamivir, previous 5 days for peramivir, and previous 17 days for baloxavir

PRECAUTIONS (IN CERTAIN CIRCUMSTANCES, PERSONS MAY RECEIVE LAIV4):

- Moderate or severe acute illness with or without fever
- History of Guillain-Barré syndrome (GBS) within 6 weeks of previous flu vaccination
- Asthma in persons aged 5 years and older
- Other underlying medical conditions that might predispose to complications after wild-type influenza infection (e.g., chronic pulmonary, cardiovascular [except isolated hypertension], renal, hepatic, neurologic, hematologic, or metabolic disorders [including diabetes mellitus])

FURTHER POINTS TO CONSIDER:

- Vaccination is recommended to be offered by the end of October and **continued throughout the flu season** until vaccine expires; for children who need 2 doses and haven't received both by the end of October as recommended, still complete their 2-dose series ensuring at least 4 weeks between doses
- **Note:**
 - Persons with a history of egg allergy who have experienced **only hives**, should receive any licensed, recommended influenza vaccine (i.e., any IIV4, RIV4, or LAIV4) that is appropriate for the recipient's age and health status.
 - Persons who report having a reaction to egg involving symptoms **other than hives** (i.e., angioedema or swelling, respiratory distress, lightheadedness, or recurrent vomiting) or required epinephrine or another emergency medical intervention may receive any licensed, recommended influenza vaccine (any IIV4, RIV4, LAIV4) that is appropriate for their age and health status.
 - If a vaccine other than cclIV4 or RIV4 is used, it should be administered in a medical setting in which a health care provider with experience in recognition and management of severe allergic conditions is immediately available
 - Refer to "2021-22 Influenza Vaccination for Persons Who Report Egg Allergy" at www.michigan.gov/flu
- If the recipient sneezes immediately after LAIV4 administration, the dose should not be repeated
- If the recipient has nasal congestion that might impede delivery of the vaccine to the nasopharyngeal mucosa, defer LAIV4 until resolution of the illness, or administer another appropriate influenza vaccine instead
- LAIV4 can be given with all other vaccines; for more information, refer to www.cdc.gov/flu
- Use current LAIV Vaccine Information Statement (VIS) with details about the Michigan Care Improvement Registry (MCIR); Michigan VIS are posted at www.michigan.gov/VIS
- Document LAIV4 on vaccine administration record and record card as "LAIV4"
- For more information on Recombinant Influenza Vaccine (RIV4, Flublok® Quadrivalent), Cell Culture-based IIV (cclIV4, Flucelvax® Quadrivalent), or Inactivated Influenza Vaccines (IIV4, High-Dose IIV4, and Adjuvanted IIV), refer to additional Quick Looks at www.michigan.gov/vaccinequicklooks

¹For more information, see Advisory Committee on Immunization Practices (ACIP) General Best Practice Guidelines for Immunization at www.cdc.gov/vaccines/hcp/acip-recs/general-recs/index.html.

For more guidance on influenza vaccine recommendations, refer to "Prevention and Control of Seasonal Influenza with Vaccines: Recommendations of the ACIP—U.S., 2021-22 Influenza Season," MMWR Recomm Rep 2021; 70(No. RR-5):1-28, located at www.cdc.gov/mmwr.

Publicly purchased LAIV4 can be administered to eligible children aged 2 through 18 years through the Vaccines for Children (VFC) program. Eligible children include those who are uninsured, underinsured, Medicaid eligible, American Indians and Alaskan Natives.

For more information regarding flu vaccination, contact your local health department, visit Michigan Department of Health and Human Services at www.michigan.gov/flu, or visit www.cdc.gov/flu or www.cdc.gov/mmwr.